

Elizabeth
Allen/R10/USEPA/US
08/15/2012 07:04 PM

To "SMITH Grant S"

cc "BORISENKO Aaron", Alan Henning, Anthony Barber, "Audra Henry", "Fred Berman", "KNOTTS Bradley A", "BOLING Brian", "POKARNEY Bruce A", Chad Schulze, "BAYHAM Chris", "STONE CHRISTINE L", "LEBER Christy M", "MITCHELL Dale L", "LORENZ Dave C", "FARRER DAVID G", DonaldM Brown, "SHIBLEY GAIL R", "COOKE Garnet R", "QUEZADA Gloria", "SMITH Grant S", "PETTIT Greg", Harold Rogers, "DOUGLAS JAE P", "KHOKHAR Jaspal M", "OCONNOR Jean C", Jed Januch, "Jeff Jenkins", "HAAVISTO Jessica L", Jill Bloom, "BRACKENBROUGH Jill", "HAMMOND Joni", "SEEDS Joshua", "EARLY-ALBERTS Julie", "BISHOP Karen", "WICKMAN Kathleen S", "HEDBERG Katrina", "COBA Katy M", Kay Morrison, Kelly McFadden, "Kenneth Orloff", "WEEKS Kevin", "KARAM Lauren", "ENDERSON Lauren L", Linda Liu, "HANSON Lisa R", "Lynn Wilder", "ALLEN Marganne", "DUBROW Matthew E", "ODENTHAL Michael L", "DAUGHERTY Peter", Raymond Wu, "JAINDL Raymond G", "Richard Kauffman", "HEALY Sandra", "HOATSON Scott", Sheila Fleming, "Daniel Sudakin", "JOSHI Sujata", "DIETZ SUSAN J", "Susan Metcalf", "Susan Moore", "KNIGHT William", "LOBOY Zach"

bcc

Subject Re: FW: Triangle Lake story in The Atlantic

Hi Grant,

thank you for providing those photographs. I certainly never meant to imply that herbicides are applied recklessly, only that any helicopter in flight is going to create some turbulence. That alone will inevitably affect and re-direct some of the spray, and taking a photo using refracted light is going to emphasize, and in fact tend to exaggerate that effect. The type of spraying of the photo shown in The Atlantic would likely look quite different if taken with the sun at the photographer's back, even more so in the flat light of an overcast day. I've learned that photos taken behind an aircraft in the right conditions can reveal things you really wouldn't typically notice:

<http://www.pbase.com/elizabethallen/image/131654721>

That aside, I suspect even turbulence-driven spray as implied in the photo would have little effect on our conceptual model, as those finer droplets would still need to be carried some distance by the wind, and I understand that the aerial applications are only done under some fairly strict wind and other meteorological conditions. And we're primarily interested in possible exposure some distance from the actual application, hopefully our air sampling results, rather than any photographic sensationalism are what's really relevant. I'd enjoy the opportunity to take a similar photo under the same lighting conditions, but only because I think it would make an interesting photo, and not to imply reckless application practices. And when I consider it, taking photos in similar lighting conditions is a crutch that I apparently lean on a little too often:

<http://www.pbase.com/elizabethallen/image/140324020>

<http://www.pbase.com/elizabethallen/image/138901684>

<http://www.pbase.com/elizabethallen/image/138901684>

<http://www.pbases.com/elizabethallen/image/138901684>

As always, your experience and insights are most appreciated.

Elizabeth

Elizabeth Allen
Office of Environmental Assessment
Risk Evaluation Unit
US Environmental Protection Agency, Region 10
1200 Sixth Ave, Suite 900
Seattle, WA 98101

206-553-1807
allen.elizabeth@epa.gov

-----"SMITH Grant S" <grant.s.smith@state.or.us> wrote: -----

To: "BORISENKO Aaron" <aaron.n.borisenko@state.or.us>, Elizabeth Allen/R10/USEPA/US@EPA, "Audra Henry" <ate1@cdc.gov>, Anthony Barber/R10/USEPA/US@EPA, "Fred Berman" <bermanf@ohsu.edu>, Jill Bloom/DC/USEPA/US@EPA, "KNOTTS Bradley A" <bradley.a.knotts@state.or.us>, "BOLING Brian" <brian.boling@state.or.us>, DonaldM Brown/R10/USEPA/US@EPA, "POKARNEY Bruce A" <bruce.a.pokarney@state.or.us>, "BAYHAM Chris" <chris.bayham@state.or.us>, "STONE CHRISTINE L" <christine.l.stone@state.or.us>, "LEBER Christy M" <christy.m.leber@state.or.us>, "MITCHELL Dale L" <dale.l.mitchell@state.or.us>, "LORENZ Dave C" <dave.c.lorenz@state.or.us>, "FARRER DAVID G" <david.g.farrer@state.or.us>, Sheila Fleming/R10/USEPA/US@EPA, "SHIBLEY GAIL R" <gail.r.shibley@state.or.us>, "COOKE Garnet R" <garnet.r.cooke@state.or.us>, "QUEZADA Gloria" <gloria.quezada@state.or.us>, "PETTIT Greg" <greg.pettit@state.or.us>, Alan Henning/R10/USEPA/US@EPA, "DOUGLAS JAE P" <jae.p.douglas@state.or.us>, Jed Januch/R10/USEPA/US@EPA, "KHOKHAR Jaspal M" <jaspal.m.khokhar@state.or.us>, "OCONNOR Jean C" <jean.c.oconnor@state.or.us>, "Jeff Jenkins" <jenkinsj@ace.orst.edu>, "HAAVISTO Jessica L" <jessica.l.haavisto@state.or.us>, "BRACKENBROUGH Jill" <jill.brackenbrough@state.or.us>, "HAMMOND Joni" <joni.hammond@state.or.us>, "SEEDS Joshua" <joshua.seeds@state.or.us>, "EARLY-ALBERTS Julie" <julie.early-alberts@state.or.us>, "BISHOP Karen" <karen.bishop@state.or.us>, "WICKMAN Kathleen S" <kathleen.s.wickman@state.or.us>, "HEDBERG Katrina" <katrina.hedberg@state.or.us>, "COBA Katy M" <katy.coba@state.or.us>, "Kenneth Orloff" <keo1@cdc.gov>, "WEEKS Kevin" <kevin.weeks@state.or.us>, "KARAM Lauren" <lauren.karam@state.or.us>, "HENDERSON Lauren L" <lauren.l.henderson@state.or.us>, "HANSON Lisa R" <lisa.r.hanson@state.or.us>, Linda Liu/R10/USEPA/US@EPA, "Lynn Wilder" <lxw2@cdc.gov>, "ALLEN Marganne" <marganne.allen@state.or.us>, "DUBROW Matthew E" <matthew.e.dubrow@state.or.us>, Kelly McFadden/R10/USEPA/US@EPA, "ODENTHAL Michael L" <michael.l.odenthal@state.or.us>, Kay Morrison/R10/USEPA/US@EPA, "DAUGHERTY Peter" <peter.daugherty@state.or.us>, "JAINDL Raymond G" <raymond.g.jaindl@state.or.us>, Harold Rogers/R10/USEPA/US@EPA, "Richard Kauffman" <rxk3@cdc.gov>, "HEALY Sandra" <sandra.healy@state.or.us>, Chad Schulze/R10/USEPA/US@EPA, "HOATSON Scott" <scott.hoatson@state.or.us>, "Daniel Sudakin" <sudakind@ace.orst.edu>, "JOSHI Sujata" <sujata.joshi@state.or.us>, "DIETZ SUSAN J" <susan.j.dietz@state.or.us>, "Susan Metcalf" <swm1@cdc.gov>, "Susan Moore" <sym8@cdc.gov>, "KNIGHT William" <william.knight@state.or.us>, Raymond

Wu/R10/USEPA/US@EPA, "LOBOY Zach" <zach.loboy@state.or.us>
From: "SMITH Grant S" <grant.s.smith@state.or.us>
Date: 08/15/2012 03:10PM
Cc: "SMITH Grant S" <grant.s.smith@state.or.us>, "BRACKENBROUGH Jill" <jill.brackenbrough@state.or.us>, "HEALY Sandra" <sandra.healy@state.or.us>, "DIETZ SUSAN J" <susan.j.dietz@state.or.us>
Subject: FW: Triangle Lake story in The Atlantic

<http://www.pixdatabase.com/data/r/o/l/rolljack/6930-helicopter-spraying-s3.jpg>

Good afternoon,

As you may have heard me mention in this morning's call, the photograph of the helicopter in the Atlantic article (shown above) does not accurately represent an aerial application of herbicide in forestry. The Atlantic photo can be found all over the internet and there are no specifics to it. I am not an expert by any means, but I have observed enough applications first-hand and have some basic knowledge pertaining to spray configurations and droplet size. I'd guess the photo is of a fungicide or pesticide application (such as Bt) where they want a very fine droplet size (75-200 microns) and not an herbicide application utilizing very coarse droplet sizes (>600 microns). I have attached a couple of photos of a helicopter applying herbicide in the coast range from a few years ago, as a comparison. Unfortunately, when people think about applying chemicals from a helicopter, they picture something similar to the Atlantic photo

I don't think everyone is aware of the technology employed in aerial application. Googling "Accuflow nozzles" for instance, can get you a brief education on one of the most commonly utilized nozzles in the industry. Pilots can also split-boom (turn one boom off) to further concentrate flow as demonstrated in another of the attached photos. The third photo clearly demonstrates where the pilot messed up and left untreated strips between each swath. You can clearly see the lines of live vegetation that grew following an aerial site prep operation. The application lines are very crisp, not possible if it were being applied as in the Atlantic photo.

Being this study is predominantly focused on aerial application, perhaps it would be beneficial for some members of our group to observe an aerial application and become more operationally familiar with the practice. I would bet we would be able to arrange that in the near future. There is an expert in our group, Mike Odenthal (ODA), who may be able to provide a little more information if anyone is curious.

Thanks,

Link

From: Elizabeth Allen [mailto:Allen.Elizabeth@epamail.epa.gov]
Sent: Tuesday, August 14, 2012 1:27 PM
To: Sheila Fleming; Scott Downey; Kelly McFadden; Linda Liu; Chad Schulze; Kay Morrison; Barry Pepich; Jill Bloom; FARRER DAVID G; BISHOP Karen; DOUGLAS JAE P; joshi.sujata@state.or.us; MITCHELL Dale L; DAUGHERTY Peter; SMITH Grant S (Link); WEEKS Kevin; BOLING Brian; PETTIT Greg; Alan Henning; Anthony Barber
Subject: Triangle Lake story in The Atlantic

In case you didn't already see this. And apologies because I know I've left some off the list...

----- Forwarded by Elizabeth Allen/R10/USEPA/US on 08/14/2012 01:16 PM -----

From: Ingrid Lobet (b) (6)
To: "Suzanne \ (NIH/NIEHS\ \ [E\] Fenton" <suzanne.fenton@nih.gov>,
Date: 08/14/2012 11:37 AM
Subject: typos corrected in herbicide story mail

Dear science advisors,

Thank you very much for talking with me as I was reporting a story about herbicides in forestry.

Web and print versions of the story may now be heard and viewed here:

<http://www.theatlantic.com/national/archive/2012/08/in-oregon-residents-struggle-to-solve-a-pesticide-mystery/261083/>

<http://www.youtube.com/watch?v=THOCHDtXeX0&list=PL418BC1BDA10B4706&index=1&feature=plcp>

I will let you know of any future television broadcasts of the story.

Thanks again,

Ingrid Lobet (b) (6)

***** ATTACHMENT NOT DELIVERED *****

This Email message contained an attachment named
image001.jpg
which may be a computer program. This attached computer program could

contain a computer virus which could cause harm to EPA's computers, network, and data. The attachment has been deleted.

This was done to limit the distribution of computer viruses introduced into the EPA network. EPA is deleting all computer program attachments sent from the Internet into the agency via Email.


If the message sender is known and the attachment was legitimate, you should contact the sender and request that they rename the file name extension and resend the Email with the renamed attachment. After receiving the revised Email, containing the renamed attachment, you can rename the file extension to its correct name.

For further information, please contact the EPA Call Center at (866) 411-4EPA (4372). The TDD number is (866) 489-4900.

***** ATTACHMENT NOT DELIVERED *****

[attachment "06 SPS 046.jpg" removed by Elizabeth Allen/R10/USEPA/US]

[attachment "06 SPS 048.jpg" removed by Elizabeth Allen/R10/USEPA/US]

[attachment "alma skips 002.jpg" removed by Elizabeth Allen/R10/USEPA/US]  -
Image.image001.jpg@01CD7AF6.A3F61790.PLAIN